Infrastructure Domain

DEFINITION

Name	Infrastructure
Description	The Infrastructure Domain defines the roles, policies, standards, and technologies that provide and manage the communications networks and computing platforms for the State's IT environment. Disciplines in this domain deal with the interconnection and interoperability of these various components including hardware and operating systems.
Rationale	The State of Missouri relies heavily on its ability to provide information in a timely manner. The infrastructure serving the various state agencies is a utility and must be a reliable transport of information. To ensure reliability and interoperability, common standards must be utilized.
Benefits	• Supports the flow and processing of information, both internal and external, in an efficient manner • Provides scalable and reliable infrastructure to support the seamless and transparent delivery of information to the State's agencies and citizenry • Promotes knowledge sharing and increases resource flexibility • Encourages stewardship and fiscal accountability

BOUNDARY

Boundary Limit Statement	This domain includes the hardware and software used to send, receive, manage, store and process data. Examples include: • Transmission media (e.g. telephone lines, wireless, cable, satellite) • Network hardware (e.g. routers, switches, bridges, hubs) • Computing devices (e.g. servers, workstations, hand-helds) • Software (e.g. operating systems, management systems) • Services (e.g. carrier services, internet access) • Deployment and management of the network and platform infrastructure It does not include end-user applications (Application Domain), development platforms (Application Domain), or electronic collaboration (mail-servers and web-servers; Application Domain). The Security Domain, Systems Management Domain and Interoperability Domain are separate from this domain; however, they are integral components for best practices.

ASSOCIATED DISCIPLINES

List Disciplines under this Domain.	Network Platform

PRINCIPLES

Related Enterprise Principles

Principle	Conflict	Relationship
GP1 – IT is an Enterprise-wide resource.	☐	
GP2 – IT systems and Enterprise Architecture will support the State's long-term business, strategies, and plans.	☐	

Principle	Conflict	Relationship
GP3 – Enterprise Architecture represents a target IT environment.	☐	
GP4 – All State Info Systems will comply with the Enterprise Architecture.	☐	
GP5 – Enterprise Architecture is adaptive and must evolve to accommodate changes in business and technology.	☐	
GP6 – The CIO and ITAB will provide leadership to the State on the use of technologies to encourage business innovations.	☐	
MP1 – Accountability will be established for all IT assets.	☐	
MP2 – State agencies will implement an organizational structure that supports architecture.	☐	
TP1 – Agencies will develop and implement technology solutions based upon industry standards in compliance with the Enterprise Architecture.	☐	
TP2 – State agencies will actively seek opportunities to share and re-use IT assets.	☐	
TP3 – The State will use a standard set of proven technologies.	☐	
ADP1 – A business process analysis and review must always accompany automation efforts.	☐	
ADP2 – The order of preference for a solution should be based on reusable components.	☐	
ADP3 – Applications programs will be architected with separation of presentation logic, business logic, and data access.	☐	
ADP4 – New applications will use defined and documented standards-based programming interfaces.	☐	
UI1 – User interfaces will be consistent, intuitive, and support multiple access delivery channels.	☐	
SP1 – The integrity, confidentiality, and security of state systems and data will be protected.	☐	
SMP1 – Technology selection will consider the ability to support centralized systems management of all technology components.	☐	
DMP1 – Data is an enterprise-wide resource.	☐	
DMP2 – The State will promote the use of electronic data capture and encourage the use of electronic service delivery.	☐	
DMP3 – The State will make timely, accurate, and complete data available to our stakeholders.	☐	

BEST PRACTICES
Related Best Practices

Best Practice	Conflict	Relationship
BP1 – Enterprise architecture must be an in-sourced effort.	☐	
BP2 – The developer's roles must be partitioned to facilitate layered application development..	☐	
BP3 – IT resources should be focused on the agency's mission.	☐	
BP4 – Application systems must be "significantly layered" and "loosely coupled".	☐	
BP5 – Applications systems should be designed using an n-tier model.	☐	

	Conflict	
BP6 – Data Warehouse technologies should be leveraged to accelerate decision-making and reduce the development burden.	☐	
BP7 – As end users become more knowledgeable about how to analyze and access information, the interfaces across separate logical boundaries must be message-based and extend to all stakeholders to include citizens, employees and vendors.	☐	
BP8 –The State must implement an enterprise wide backbone network that provides a "single network image" as if it were a virtual, enterprise wide LAN.	☐	
BP9 – Application systems should be event-driven.	☐	
BP10 –- Databases should have a high degree of physical partitioning.	☐	
BP11 – On-line transaction processing (OLTP) should be separated from Data Warehouse and other end-user computing.	☐	
BP12 -- A comprehensive "information architecture" that encompasses the entire "work architecture" (e.g., process models, "events", transaction data, state descriptions) should evolve.	☐	
BP13 – Data redundancy will be documented and managed effectively.	☐	
BP14 – Metadata should be documented in such a way as to allow an authorized user to make use of the data in end-user query and decision-support tools.	☐	
BP15 – The state will use a standard set of proven technologies; the proliferation of technologies will be avoided.	☐	
BP16 – Technology selection will consider, in addition to functionality, the ability to support systems management disciplines that are oriented toward centralized management of all technology components.	☐	
BP17 – New applications will be modular and independent (autonomous) in nature. They will access common data, use common services and have only inherently essential dependence on other applications (e.g. for provision of up-to-date data).	☐	
BP18 – Logical boundaries must be established between the partitions, applications or database, and the logical boundaries must not be violated.	☐	

TECHNOLOGY TRENDS
Related Technology Trends

Technology Trends	Conflict	Relationship
TT1 – A severe shortage of qualified IT professionals is resulting in stiff market competition.	☐	
TT2 – The performance of computer hardware will continue to grow exponentially, while costs continue to decline dramatically (Moore's Law.)	☐	
TT3 – Networking performance and capacity continue to increase rapidly.	☐	
TT4 –The increasing failure of traditional software development methods is producing fundamentally new techniques for the execution of IT projects.	☐	
TT5 – The Internet will drive the technical standards for network computing.	☐	
TT6 – Microsoft and Intel will continue to strongly influence business computing.	☐	

TT7 – Organizations are moving towards the total digitization of all forms of corporate data and the creation of enterprise-wide data warehouses.	☐	
TT8 – "Intelligence-oriented" technologies are becoming increasingly available from commercial vendors.	☐	
TT9 – Enterprises are using new technologies to reduce administration costs and establish a unified system management approach for corporate computing.	☐	
TT10 – Unified management and governed evolution of the Enterprise Architecture will become a dominant best practice even where asset ownership is federated. Federated architectures will focus on supporting common business infrastructure initiatives across semi-autonomous business units.	☐	

STATE CONTRACTS

Planned Contracts	
Existing Contracts	Prime Vendor, IBM (CISCO products), WSCA, Network Transport, Sprint (MAN contract, phones, interior wiring), Lantel, Computer Cable Connections, Socket Internet Services (Internet dial access), SBC and IBM and Sprint (ATM products)

CURRENT STATUS

Provide the Current Status	☐ In Development ☐ Under Review ☒ Approved ☐ Rejected

AUDIT TRAIL

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